

Southeast Missouri State University

Department of: Agriculture

Course Number: AO 323

Title of Course: Plant Pathology

Proposed: 9/98

I. Catalog Description and Credit Hours of Course:

Microbiological principles and cultural practices associated with diseases in plant production. Two lectures. II. (2).

II. Prerequisites: BI200

III. Purposes or Objectives of the Course:

- A. To become familiar with the basic principles involving fungal, bacterial, viral, and nematode based diseases in plants.
- B. To gain a knowledge of the environmental factors influencing plant diseases.
- C. To gain an understanding of the influence of plant pathogens in crop-ecology.
- D. To become familiar with the classification of plant protection chemicals.
- E. To become familiar with the principles of an integrated approach to plant disease management.

IV. Expectations of Students:

- A. Evidence of study outside of lectures as revealed by examinations.
- B. Active classroom participation.
- C. Completion of all written assignments.
- D. All writing assignments will conform to the style guide of the American Society of Agronomy.
- E. Study groups will maintain throughout the semester a plant pathogen portfolio detailing the pathogen's symptoms, environmental constraints, lifecycle and ecology, and control methods.
- F. Students will demonstrate the integration of control measures by producing a series of written integrated management plans for selected crops.
- G. Students will be expected to prepare organized and technically correct professional presentations using available multimedia techniques.

V. Course Content:

A.	Lecture content.	<u>Hours</u>	
1.	Parasitism and disease development.	1	
2.	How pathogens attack plants.	1	
3.	Effects of pathogens on plant physiological functions.	1	
4.	Plant defenses.		1
5.	Genetics of plant diseases.	1	
6.	Environmental effects on infectious plant disease.	1	

7.	Examination #1	1	
8.	Control of plant diseases.	1	
9.	Environmental factors that cause plant disease.	1	
10.	Plant diseases caused by fungi.*	1	
11.	Examination #2	1	
12.	Plant diseases caused by prokaryotes.*	5	
13.	Plant diseases caused by viruses.*	2	
14.	Plant diseases caused by nematodes.*		2
15.	Examination #3	1	

*Student presentations

VI. Textbook

Agrios, George, N. 1997. Plant Pathology. Academic Press, New York.
[ISBN 0-12-044564-6].

VII. Student Evaluation:

A.	Hour Exams (3)	300 points
B.	Final Examination	100 points
C.	Portfolio	50 points
D.	Management plans	100 points
E.	Presentations	<u>50 points</u>
		600 points

Grading scale: 91<A<100; 81<B<90; 71<C<80; 61<D<70; F<61